

## A New Species of the Army Ant Genus *Aenictus* from Taiwan (Insecta; Hymenoptera; Formicidae)

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**Abstract.** A new species of the genus *Aenictus* from Taiwan, *Aenictus lifulae* sp. nov., is described and illustrated based on the worker and male. The diagnosis of this species of worker caste is shown as follows: Size small (head length 0.55–0.58 mm, head width 0.48–0.50 mm), antennae 10-segmented, mandibles subtriangular with 7-teeth, scapes short (scape length 0.35–0.38 mm), promesonotum and propodeum in profile convex, anteriormost of propodeum dipping and posterior corner angulate, and subpetiolar process low and rounded.

### Introduction

The genus *Aenictus* is widely distributed from the Ethiopian to the Indo-Australian regions. The genus is one of the true army ants (subfamily Dorylinae), which predate other ants, social wasps, termites, and other arthropods (Wilson, 1971).

In 1913, Forel described three forms *A. longi taivanae*, *A. latiscapus souteri*, and *A. ceylonicus* var. *formosensis*, and recorded one species *A. punctiventris* Emery from Taiwan. Santschi (1937) described *A. latiscapus souteri* var. *satoi* as a new variety, and recently Wilson (1964) synonymized *A. ceylonicus* var. *formosensis* with *A. ceylonicus*. Thus, the genus *Aenictus* has been represented by 5 forms in Taiwan. However, the worker caste is known only in the species *A. ceylonicus*, and other 4 forms are based on the male caste only.

In the present paper, the author is going to describe one species, *Aenictus lifulae*, based on the worker and male castes from Taiwan.

### *Aenictus lifulae* sp. nov.

(Figs. 1–13)

[Japanese name: Hime-sasurai-ari]

**Description.** Worker—Head length 0.55–0.58 mm; head width 0.48–0.50 mm; scape length 0.35–0.38 mm; cephalic index (head width  $\times$  100/head length) 86–91; scape index (scape length  $\times$  100/head width) 70–79; Weber's length of alitrunk 0.83–0.88 mm; alitrunk width 0.33–0.35 mm; petiole length 0.18–0.20 mm; petiole height 0.20–0.23 mm; dorsal petiole width 0.13–0.15 mm; postpetiole length 0.18–0.20 mm; postpetiole

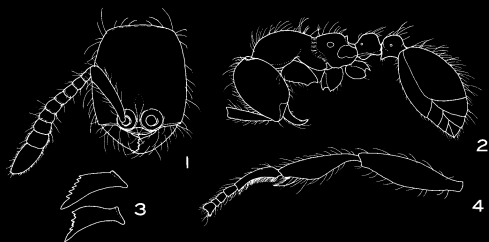
height 0.18–0.19 mm; dorsal postpetiole width 0.13–0.14 mm; total length 2.2–2.5 mm. (Five individuals were measured.)

Head subrectangle, 1.15  $\times$  as long as its maximum width, with slightly convex sides and very feebly convex occipital border. Mandibles subtriangular, somewhat narrower, with 7 teeth; apical tooth well developed. Anterior clypeal border concave. Antennae 10-segmented; scape short; 2nd segment 1.4  $\times$  as long as broad; from 3rd segment to 9th segment broader than long, increasing gradually in size; 9th segment 0.8  $\times$  as long as broad; apical segment 2.0  $\times$  as long as broad. Length of antennal funicles 0.68 mm; last four segments in a ratio of length from the tip 16: 7: 6: 6.

General form of alitrunk, petiole, postpetiole, and gaster as in Fig. 2. Promesonotum convex in profile; propodeum convex, anteriormost dipping, posterior corner angulate and dull pointing. Propodeal spiracles oval, approximately 0.06 mm in maximum diameter. Viewed from above, promesonotum with convex sides; lateral border of mesoscutum and propodeum parallel. Viewed from the lateral, petiole and postpetiole rectangle; round in dorsal outline. Viewed from above, petiole suboval, 1.8  $\times$  as long as broad; postpetiole also suboval, 1.4  $\times$  as long as broad. Subpetiolar process low and rounded.

Legs long; fore femur 0.37–0.40 mm, fore tibia 0.38–0.40 mm long; middle femur 0.43–0.44 mm long, middle tibia 0.45–0.46 mm; hind femur 0.53–0.54 mm long, hind tibia 0.56–0.58 mm long.

Subeject pilosity long and relatively abundant;



Figs. 1-4. *Aenictus lifuiae* sp. nov. (worker)—1: Head, full face view. 2: Body shape, lateral view. 3: Mandible. 4: Foreleg.

length of the longest hair on promesonotum about 0.15 mm; length of the longest hair on head 0.13 mm; gastral hairs up to 0.10 mm in length. Pilosity, viewed from the lateral, present in each dorsals as follows: Promesonotum 20-26, propodeum 8-10, petiole 5-7, postpetiole 9-10.

Head entirely smooth and shining. Mandibles, petiole, postpetiole, and scapes moderately microreticulate and subopaque. Alitrunk microreticulate; dorsal face of propodeum shining. Gaster and legs moderately shining.

Alitrunk reddish brown. Head, petiole, postpetiole, gaster, and legs yellow. Antennae yellowish; apical three segments lighter. Clypeus and mandibles slightly darker; mandibular teeth reddish brown.

Male—Head length 0.75 mm; head width 1.53 mm; scape length 0.65 mm; cephalic index 204; scape index 42; Weber's length of alitrunk 2.64 mm; alitrunk width 1.47 mm; petiole length 0.58 mm; petiole height 0.88 mm; dorsal petiole width 1.00 mm; dorsal width of 1st gasteric tergite 1.15 mm; fore wing length 5.8 mm; total length 6.5 mm.

Head as in Fig. 5,  $0.49\times$  as long as its maximum width. Compound eyes large, convex, with sparsely short standing hairs; maximum diameter approximately 0.68 mm. Mandibles long, 0.90 mm in length, sickle-shaped. Clypeus small, anterior border convex. Scape short, flat, very broad;  $2.0\times$  as long as broad. Antennae 13-segmented, 2nd segment  $2.0\times$  as long as broad;

3rd segment  $1.5\times$  as long as broad; from 4th segment to 12th segment approximately  $1.2\times$  as long as broad; apical segment  $3.4\times$  as long as broad. Ocelli large, well convex but less half-spherical. Lateral ocellus 0.16 mm in diameter; distance between lateral ocelli 0.33 mm.

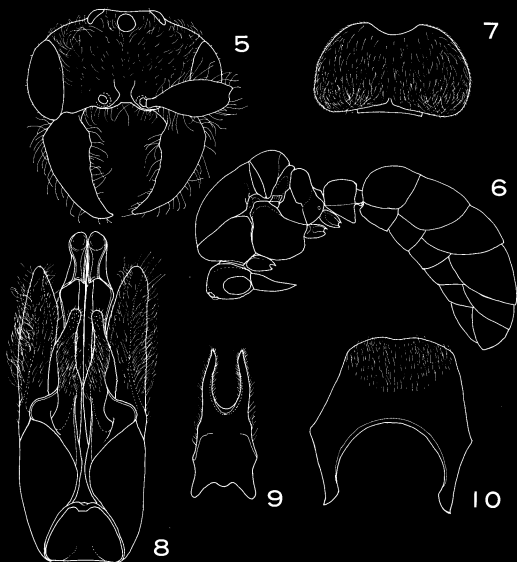
Alitrunk massive; mesoscutum moderately convex; scutellum round posteriorly. Viewed from above, mesonotum suboval,  $1.3\times$  as long as maximum width; posterior border of propodeum convex. Subpetiolar process well-developed, right-angled triangular.

Legs short, femore and tibia folicaceous like the scapes. Tiviae slightly clavate toward their apical 2/3. Posterior border of 6th gasteric sternite convex, with a dent in the middle; subgenital plate as in Fig. 9; genitalia as in Fig. 8.

Head, alitrunk, petiole, and subpetiolar process abundant in long pubescence; 1st gasteric tergite less abundant than petiole; from 2nd to 4th gasteric tergites gradually sparse and short. Clypeus and antennal scapes with long erect or suberect pilosities.

Color dark brown; mandibles brown; scapes and legs yellow.

*Types.* HOLOTYPE. Worker, 25, VIII, 1980, Meishan Cun (alt. ca. 800 m), Taoyuan Xiang, Kaohsiung Hsien, Taiwan, M. Terayama leg. PARATYPES. 152 workers, 1 male, (from the same nest as holotype): 5 workers, 10, VIII, 1980, Chihpen, Taitung City, Taiwan, M. Terayama leg.



Figs. 5–10. *Aenictus lifui* sp. nov. (male)—5: Head, full face view. 6: Body shape, lateral view. 7: Petiole, dorsal view. 8: Genitalia. 9: Subgenital plate. 10: 6th gasteric sternite.

The holotype is deposited in the National Institute of Agro-Environment Sciences, and the paratypes in the National Institute of Agro-Environment Sciences, Taiwan Agricultural Research Institute, Osaka Museum of Natural History, and the author's collection.

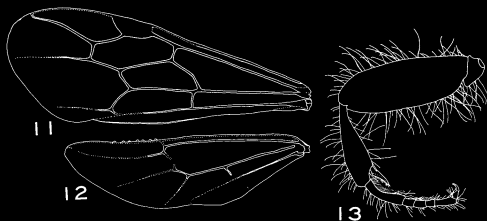
**Remarks.** Materials from Meishan Cun were taken at hard clay soil of the road cutting about 50 cm above ground level. When the author found it at 5 p.m., the colony was prepared for the

nuptial flight. One male was in the nest entrance, and about 40 workers were seen out of the nest, gathering around the nest entrance like circlar.

This new species is named for Miss Lifui Li, who gave me continuous encouragement and financial support for proceeding in my study.

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Figs. 11–13. *Aenictus lifuiae* sp. nov. (male)—11: Forewing. 12: Hindwing. 13: Foreleg.

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#### 台湾産ヒメサスライアリ属 (Genus *Aenictus*) の 1 新種

寺山 守

台湾から得られたサスライアリ亜科 (Subfamily Dorylinae) ヒメサスライアリ属 (Genus *Aenictus*) に属する 1 新種を記載した。本種はハタキアリにおいて、サイズが小さい (頭長, 0.55~0.58 mm, 頭幅, 0.46~0.50 mm), 大アゴは亜三角形で 7 歯を備える, 触角柄節は短い (0.35~0.38 mm), 側面から見て前・中胸背面, 前伸腹節背面がそれぞれ弧をえがく, 前伸腹節の背部前縁は小さく凹み, 後縁部は角ばり鈍く突出する。腹柄節下部に, 側面から見てロープ状の小さな突出物がある, 等の特徴により同属の他種と区別される。

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